

=> fil lreg

VIT D (BROAD)

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=> fil reg

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STRUCTURE FILE UPDATES: 21 NOV 2004 HIGHEST RN 785750-23-4
DICTIONARY FILE UPDATES: 21 NOV 2004 HIGHEST RN 785750-23-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
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<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 08:24:11 ON 23 NOV 2004
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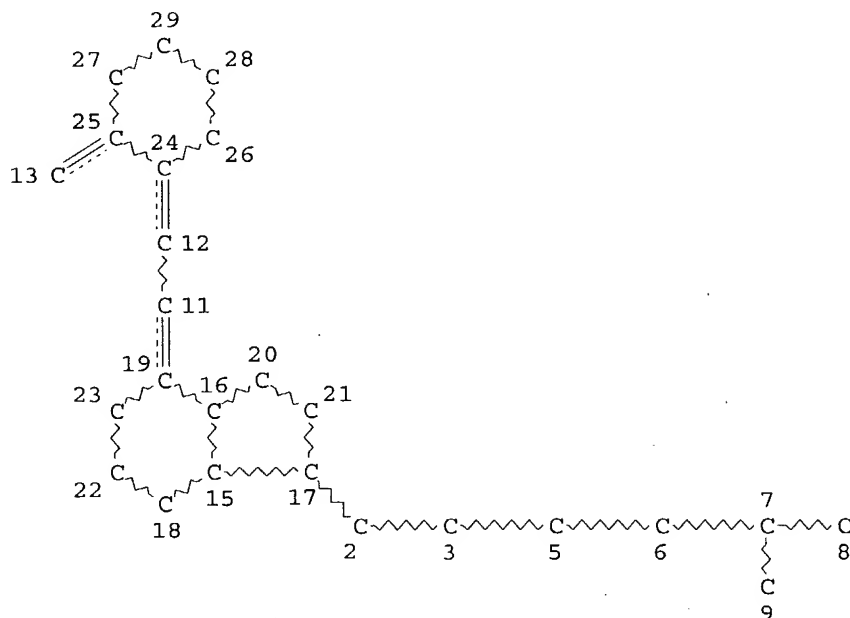
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FILE COVERS 1907 - 23 Nov 2004 VOL 141 ISS 22
FILE LAST UPDATED: 22 Nov 2004 (20041122/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d que 179

L1 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L2 3182 SEA FILE=REGISTRY SSS FUL L1
 L3 14399 SEA FILE=REGISTRY ABB=ON PLU=ON 591.62.22/RID
 L4 20062 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L5 9525 SEA FILE=HCAPLUS ABB=ON PLU=ON L3
 L6 32 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND L5
 L7 (1)SEA FILE=REGISTRY ABB=ON PLU=ON 19356-17-3/RN
 L8 (2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L7
 L9 (2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L8 OR 19356-17-3P OR 19356-17-3D?
 L10 (1)SEA FILE=REGISTRY ABB=ON PLU=ON 66612-29-1/RN
 L11 (112)SEA FILE=HCAPLUS ABB=ON PLU=ON L10
 L12 (112)SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR 66612-29-1P OR 66612-29-1D?
 L13 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L9 AND L12
 L14 (31272)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC) OR 25HCC OR ?CHOLECALCIF? OR VITAMIN D OR (VITAMIN(1W)D) OR VITAMIN D3 OR (VITAMIN(1W)D3)
 L15 (204)SEA FILE=HCAPLUS ABB=ON PLU=ON ?CALCIDIOL? OR ?CALCIFEDIOL? OR ?CALDEROL? OR ?DEDROGYL? OR ?DIDROGYL? OR ?HIDROFEROL?
 L16 (2)SEA FILE=HCAPLUS ABB=ON PLU=ON (RO 8-8892) OR (RO(1W)8(1W)8892) OR (U 32070E) OR (U(1W)32070E)
 L17 (1857)SEA FILE=HCAPLUS ABB=ON PLU=ON (VITAMIN(1W)D?)/CW
 L18 (259115)SEA FILE=HCAPLUS ABB=ON PLU=ON VITAMINS+PFT,NT/CT
 L19 (5811)SEA FILE=HCAPLUS ABB=ON PLU=ON ?PHTHALAZIN? OR ?ISOLUMINOL? OR ABEI
 L20 (2)SEA FILE=HCAPLUS ABB=ON PLU=ON L9 AND L19

L21 (4)SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L15 OR L16 OR L17 OR L18) AND L12
 L22 (10)SEA FILE=HCAPLUS ABB=ON PLU=ON (L14 OR L15 OR L16 OR L17) AND L19
 L23 (43627)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L) IMMUNOASSAY"+PFT,NT/CT
 L24 (51101)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,NT/CT
 L25 (52656)SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
 L26 (43)SEA FILE=HCAPLUS ABB=ON PLU=ON (L23 OR L24 OR L25) (L) ((L14 OR L15 OR L16))
 L27 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND (L12 OR L19)
 L28 (14)SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR L20 OR L21 OR L22 OR L27
 L29 (35804)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC) OR 25HCC OR ?CHOLECALCIF? OR ?VITAMIN? D OR (?VITAMIN?(1W)D) OR ?VITAMIN? D3 OR (?VITAMIN(1W)D3?)
 L30 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L12
 L31 (13)SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND L19
 L32 (17)SEA FILE=HCAPLUS ABB=ON PLU=ON L28 OR L30 OR L31
 L33 (36381)SEA FILE=HCAPLUS ABB=ON PLU=ON (D OR D3) (3A) ?VITAMIN?
 L34 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND L12
 L35 (14)SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND L19
 L36 (18)SEA FILE=HCAPLUS ABB=ON PLU=ON (L34 OR L35) OR L32
 L37 (1)SEA FILE=REGISTRY ABB=ON PLU=ON 19356-17-3/RN
 L38 (2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L37
 L39 (2974)SEA FILE=HCAPLUS ABB=ON PLU=ON L38 OR 19356-17-3P OR 19356-17-3D?
 L40 (1)SEA FILE=REGISTRY ABB=ON PLU=ON 66612-29-1/RN
 L41 (112)SEA FILE=HCAPLUS ABB=ON PLU=ON L40
 L42 (112)SEA FILE=HCAPLUS ABB=ON PLU=ON L41 OR 66612-29-1P OR 66612-29-1D?
 L43 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L42
 L44 (31272)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC) OR 25HCC OR ?CHOLECALCIF? OR VITAMIN D OR (VITAMIN(1W)D) OR VITAMIN D3 OR (VITAMIN(1W)D3)
 L45 (204)SEA FILE=HCAPLUS ABB=ON PLU=ON ?CALCIDIOL? OR ?CALCIFEDIOL? OR ?CALDEROL? OR ?DEDROGYL? OR ?DIDROGYL? OR ?HIDROFEROL?
 L46 (2)SEA FILE=HCAPLUS ABB=ON PLU=ON (RO 8-8892) OR (RO(1W)8(1W)8892) OR (U 32070E) OR (U(1W)32070E)
 L47 (1857)SEA FILE=HCAPLUS ABB=ON PLU=ON (VITAMIN(1W)D?)/CW
 L48 (259115)SEA FILE=HCAPLUS ABB=ON PLU=ON VITAMINS+PFT,NT/CT
 L49 (5811)SEA FILE=HCAPLUS ABB=ON PLU=ON ?PHTHALAZIN? OR ?ISOLUMINOL? OR ABEI
 L50 (2)SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L49
 L51 (4)SEA FILE=HCAPLUS ABB=ON PLU=ON (L44 OR L45 OR L46 OR L47 OR L48) AND L42
 L52 (10)SEA FILE=HCAPLUS ABB=ON PLU=ON (L44 OR L45 OR L46 OR L47) AND L49
 L53 (43627)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L) IMMUNOASSAY"+PFT,NT/CT
 L54 (51101)SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,NT/CT
 L55 (52656)SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
 L56 (43)SEA FILE=HCAPLUS ABB=ON PLU=ON (L53 OR L54 OR L55) (L) ((L44 OR L45 OR L46))
 L57 (14)SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND (L39 OR L47)
 L58 (1)SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND (L42 OR L49)
 L59 (14)SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L50 OR L51 OR L52 OR L58

L60 (13)SEA FILE=HCAPLUS ABB=ON PLU=ON L57 NOT L59
 L61 (35804)SEA FILE=HCAPLUS ABB=ON PLU=ON ?SECOCHOLEST? OR (25(1W)HCC)
 OR 25HCC OR ?CHOLECALCIF? OR ?VITAMIN? D OR (?VITAMIN?(1W)D)
 OR ?VITAMIN? D3 OR (?VITAMIN(1W)D3?)
 L62 (60)SEA FILE=HCAPLUS ABB=ON PLU=ON L61 (L) (L53 OR L54 OR L55)
 L63 (8)SEA FILE=HCAPLUS ABB=ON PLU=ON L62 AND L47
 L64 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 OR L60
 L65 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 NOT (L36 OR L64)
 L66 43649 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS (L)
 IMMUNOASSAY"+PFT,NT/CT
 L67 51123 SEA FILE=HCAPLUS ABB=ON PLU=ON "IMMUNOCHEMICAL ANALYSIS"+PFT,
 NT/CT
 L68 52678 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOASSAY+PFT,NT/CT
 L69 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 AND ((L66 OR L67 OR L68))

 L70 6955035 SEA FILE=HCAPLUS ABB=ON PLU=ON ?ASSAY? OR TEST? OR ?ANALY?
 OR ?TRACE? OR ?DETECT? OR ?LABEL? OR ?CONJUGAT? OR ?ADDUCT?
 L72 1825 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (L) L70
 L73 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L72 AND L3
 L74 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND L70
 L75 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L69 OR L74
 L76 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L75 NOT (L36 OR L64)
 L77 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 NOT L76
 L78 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L77 AND (XXVI OR RADIATION)/TI

 L79 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 OR L78

=> file stnguide

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FILE CONTAINS CURRENT INFORMATION.
 LAST RELOADED: Nov 19, 2004 (20041119/UP).

=> d ibib abs ed hitind hitstr retable
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

* L79 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:555772 HCAPLUS
 DOCUMENT NUMBER: 137:106040
 TITLE: Vitamin D assay
 INVENTOR(S): Garritty, Martha; Tran, Jacqueline
 PATENT ASSIGNEE(S): Quest Diagnostics Inc., USA
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| WO 2002057797 | A2 | 20020725 | WO 2001-US47267 | 20011203 |
| WO 2002057797 | A3 | 20030821 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
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UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
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GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1360507 A2 20031112 EP 2001-992054 20011203

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2001-761969 A 20010116
WO 2001-US47267 W 20011203

AB The invention concerns a kit and a method of using the kit for determining a concentration of a vitamin D component. In a broad embodiment, the kit comprises

a releasing composition. The releasing composition facilitates in releasing the vitamin D component from a vitamin D component binding-protein. In one embodiment, the releasing composition is substantially free of an organic solvent.

In one embodiment, the kit further comprises a **detecting** composition. The **detecting** composition facilitates in determining the concentration of the vitamin D component. Further in accordance with the present invention, a kit according to this invention may be useful for determining the concentration of the

vitamin D component present in a mammal fluid. The mammal fluid may be milk, whole blood, serum, plasma and mixts. thereof.

ED Entered STN: 26 Jul 2002

IC ICM G01N033-82

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 13

ST vitamin D chemiluminescent **test** kit human blood **label**
assay

IT Solvents

(organic; vitamin D **assay**)

IT Blood **analysis**

Blood plasma

Blood serum

Body fluid

Capillary tubes

Chemiluminescent substances

Fluorescent substances

Human

Labels

Magnetic materials

Mammalia

Milk

Process automation

Surfactants

Test kits

(vitamin D **assay**)

IT Radionuclides, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(vitamin D **assay**)

IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(vitamin D **assay**)

IT Bases, **analysis**
 RL: ARU (Analytical role, unclassified); PRP (Properties); ANST
 (Analytical study)
 (vitamin D **assay**)

IT Oligomers
 RL: PRP (Properties)
 (vitamin D **assay**)

IT Proteins
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (vitamin D component binding-; vitamin D **assay**)

IT 50-14-6, Vitamin D2 67-97-0, Vitamin D3 511-28-4
 , Vitamin D4 1406-16-2, Vitamin D 32222-06-3,
 1,25-Dihydroxyvitamin D 64719-49-9, 25(Hydroxy)-vitamin D
 71761-06-3, Vitamin D5 107950-93-6, Vitamin D6
 RL: ANT (Analyte); ANST (Analytical study)
 (vitamin D **assay**)

IT 58-85-5, Biotin 521-31-3, Luminol 22559-71-3, Acridinium
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (vitamin D **assay**)

IT 1310-58-3, Potassium hydroxide (K(OH)), **analysis** 1310-73-2,
 Sodium hydroxide (Na(OH)), **analysis**
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (vitamin D **assay**)

IT 10016-20-3, α -Cyclodextrin 12619-70-4, Cyclodextrin 12619-70-4D,
 Cyclodextrin, β -randomly methylated derivs.
 RL: ARU (Analytical role, unclassified); PRP (Properties); ANST
 (Analytical study)
 (vitamin D **assay**)

IT 9002-93-1, Triton X-100 9005-64-5, Tween-20
 RL: NUU (Other use, unclassified); USES (Uses)
 (vitamin D **assay**)

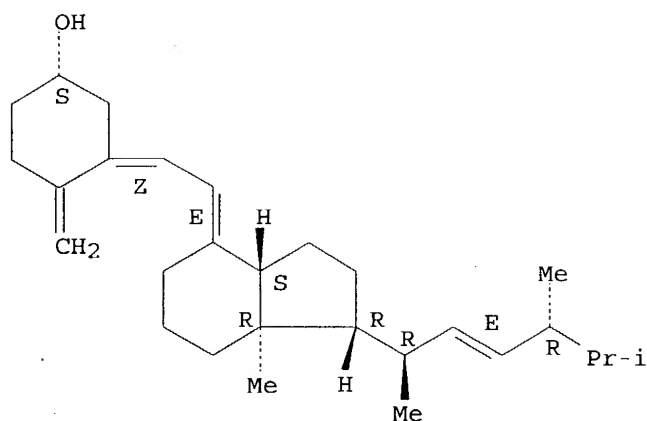
IT 54-21-7, Sodium salicylate 69-72-7D, metal derivs.
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
 (vitamin D **assay**)

IT 50-14-6, Vitamin D2 67-97-0, Vitamin D3 511-28-4
 , Vitamin D4 32222-06-3, 1,25-Dihydroxyvitamin D
 71761-06-3, Vitamin D5
 RL: ANT (Analyte); ANST (Analytical study)
 (vitamin D **assay**)

RN 50-14-6 HCAPLUS

CN 9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 β ,5Z,7E,22E)- (9CI)
 (CA INDEX NAME)

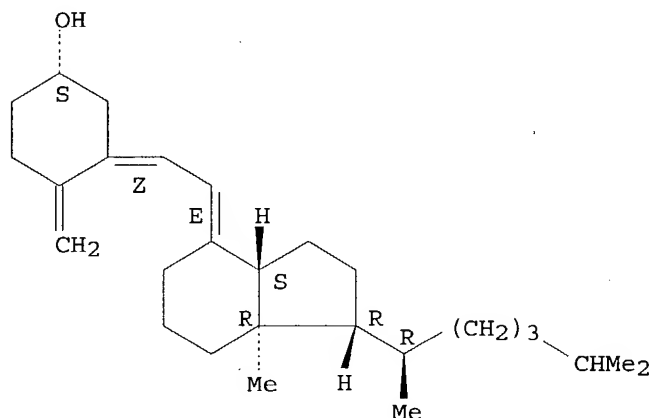
Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



RN 67-97-0 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-trien-3-ol, (3 β ,5Z,7E)- (9CI) (CA INDEX NAME)

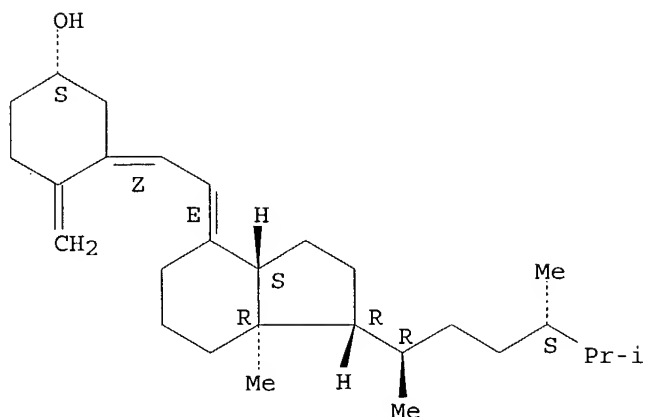
Absolute stereochemistry.
Double bond geometry as shown.



RN 511-28-4 HCAPLUS

CN 9,10-Secoergosta-5,7,10(19)-trien-3-ol, (3 β ,5Z,7E)- (9CI) (CA INDEX NAME)

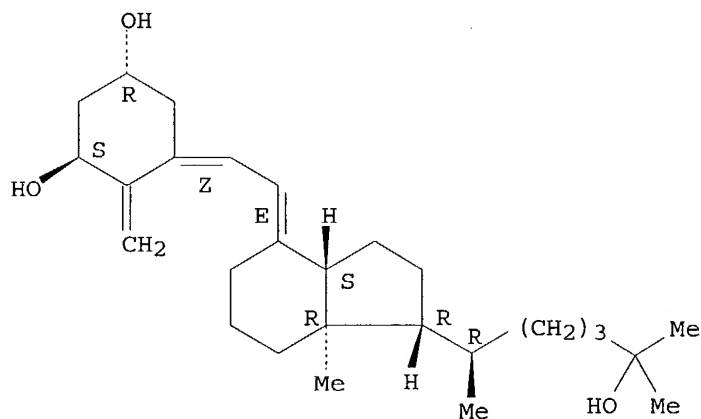
Absolute stereochemistry.
Double bond geometry as shown.



RN 32222-06-3 HCAPLUS

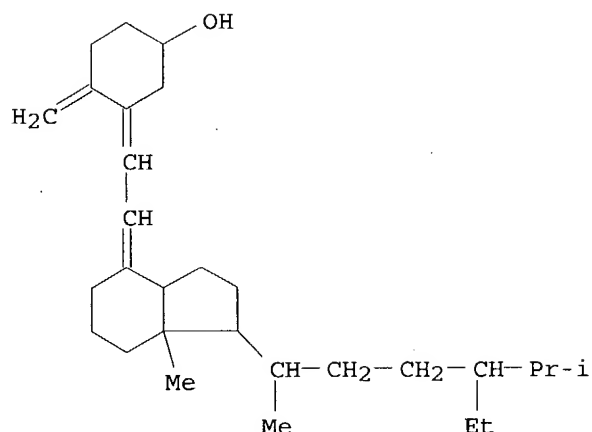
CN 9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1 α ,3 β ,5Z,7E) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

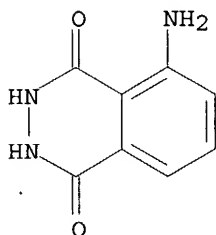


RN 71761-06-3 HCAPLUS

CN 9,10-Secostigmasta-5,7,10(19)-trien-3-ol, (3 β ,5Z,7E) - (9CI) (CA INDEX NAME)



IT 521-31-3, Luminol
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (vitamin D assay)
 RN 521-31-3 HCAPLUS
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX
 NAME)

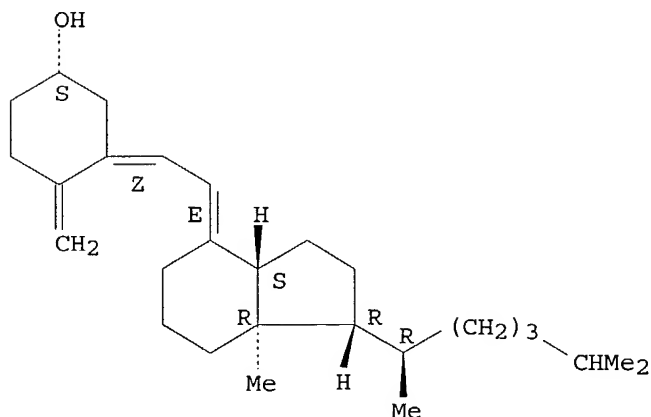


=> d ibib abs ed hitind hitstr retable 2-
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

L79 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1988:139408 HCAPLUS
 DOCUMENT NUMBER: 108:139408
 TITLE: Measurement of chemiluminescence of solids as a
 possible indicator system for rapid dose determination
 after radiation accidents?
 AUTHOR(S): Hammermaier, A.; Reich, E.; Boegl, W.
 CORPORATE SOURCE: Inst. Strahlenhyg., Bundesgesundheitsamtes,
 Neuherberg, 8042, Fed. Rep. Ger.
 SOURCE: ISH-Heft (1987), 110, 122 pp.
 CODEN: ISHHE4; ISSN: 0175-4254
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB An indicator system capable of rapidly assessing the dose from accidental

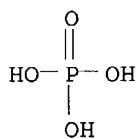
Double bond geometry as shown.



RN 108728-06-9 HCAPLUS
 CN L-Ascorbic acid, mixt. with 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methylthiazolium chloride monohydrochloride, calcium hydrogen phosphate, 2-hydroxy-1,2,3-propanetricarboxylic acid calcium salt (2:3), retinyl acetate and (3 β ,5Z,7E)-9,10-secocholesta-5,7,10(19)-trien-3-ol (9CI) (CA INDEX NAME)

CM 1

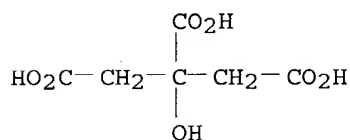
CRN 7757-93-9
 CMF Ca . H3 O4 P



● Ca

CM 2

CRN 813-94-5
 CMF C6 H8 O7 . 3/2 Ca

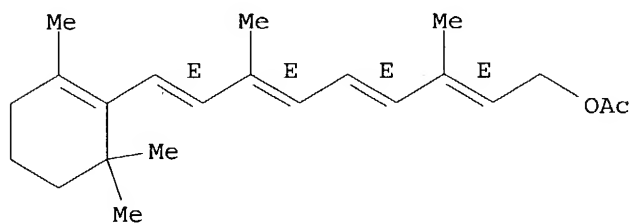


● 3/2 Ca

CM 3

CRN 127-47-9
 CMF C22 H32 O2

Double bond geometry as shown.

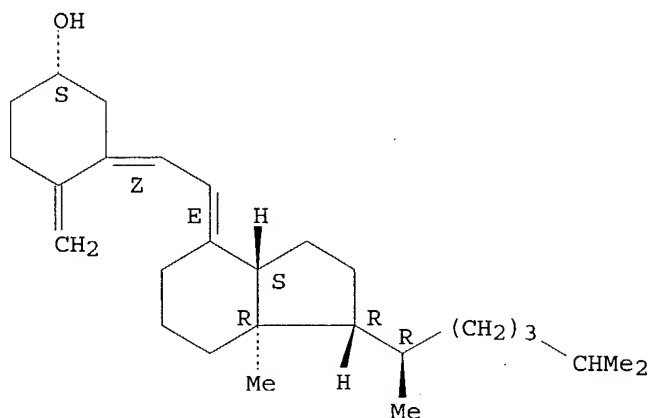


CM 4

CRN 67-97-0

CMF C27 H44 O

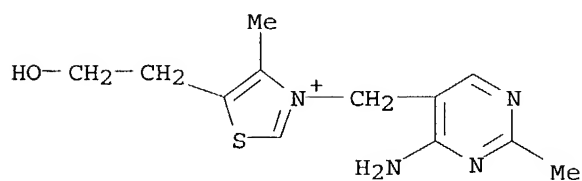
Absolute stereochemistry.
Double bond geometry as shown.



CM 5

CRN 67-03-8

CMF C12 H17 N4 O S . Cl H . Cl

● Cl⁻

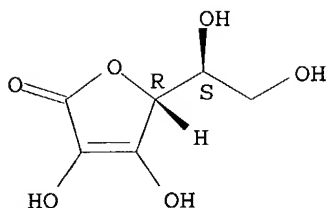
● HCl

CM 6

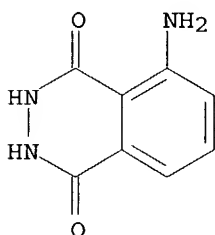
CRN 50-81-7

CMF C6 H8 O6

Absolute stereochemistry.



IT 521-31-3, Luminol
 RL: PROC (Process)
 (in chemiluminescence dosimetry, with pharmaceuticals as indicator system)
 RN 521-31-3 HCAPLUS
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



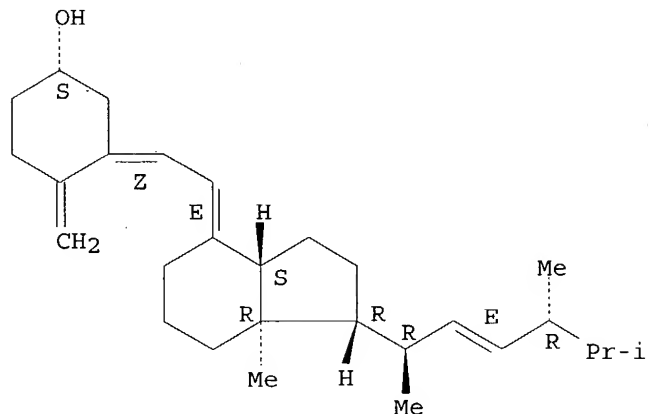
L79 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1987:636635 HCAPLUS
 DOCUMENT NUMBER: 107:236635
 TITLE: Diazapolycyclic compounds. XXVI.
 Diazaquinone adducts from isoprenoid compounds
 AUTHOR(S): Gomez Contreras, Fernando; Lora-Tamayo, Manuel; Sanz, Ana Maria
 CORPORATE SOURCE: Fac. Cienc. Quim., Univ. Complutense, Madrid, 28040, Spain
 SOURCE: Heterocycles (1987), 25(1), 193-200
 CODEN: HTCYAM; ISSN: 0385-5414
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 107:236635
 AB Diazaquinones such as phthalazine- and benzo(g)phthalazine-1,4-dione react with isoprenoid compds. to give [4 + 2] diazapolycyclic adducts. Treatment with β -myrcene, alloocimene, neoalloocimene or ergocalciferol affords the expected cycloaddn. products in good yields, whereas no reaction is found with β -ionone or retinol acetate. Some side-chain derivs. of these adducts have also been prepared
 ED Entered STN: 25 Dec 1987
 CC 28-15 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 30
 IT 50-14-6, Ergocalciferol 123-35-3, β -Myrcene 673-84-7, Alloocimene 7216-56-0, Neoalloocimene
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cycloaddn. reaction of, with phthalazinediones)
 IT 1445-69-8 21389-21-9
 RL: RCT (Reactant); RACT (Reactant or reagent)

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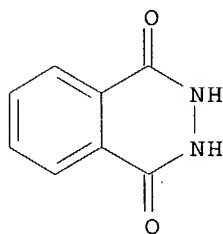
      (oxidation of, by lead tetraacetate, phthalazinedione from)
IT  50-14-6, Ergocalciferol
      RL: RCT (Reactant); RACT (Reactant or reagent)
      (cycloaddn. reaction of, with phthalazinediones)
RN  50-14-6  HCAPLUS
CN  9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 $\beta$ ,5Z,7E,22E) - (9CI)
      (CA INDEX NAME)

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Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.



| | | |
|----|-------------------------------------------------------------|--------------------------------------|
| IT | 1445-69-8 | |
| | RL: RCT (Reactant); RACT (Reactant or reagent) | |
| | (oxidation of, by lead tetraacetate, phthalazinedione from) | |
| RN | 1445-69-8 | HCAPLUS |
| CN | 1,4-Phthalazinedione, 2,3-dihydro- | (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME) |



L79 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:2581 HCAPLUS
DOCUMENT NUMBER: 106:2581
TITLE: Luminescent **tracers** coupled to liquids as
probes and their use in **immunoassays**
INVENTOR(S): Kosak, Kenneth M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 106,354.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 4604364 | A | 19860805 | US 1983-487267 | 19830421 |
| US 4000252 | A | 19761228 | US 1974-430921 | 19740104 |
| PRIORITY APPLN. INFO.: | | | US 1974-430921 | 19740104 |
| | | | US 1979-106354 | 19791221 |

AB A nonradioactive, photon-emitting substance is coupled to a ligand, antigen, or antibody for use as a **tracer** in an **immunoassay** for determination of a protein, hormone, drug, virus, etc. In a competitive binding **assay** for human IgG, bacterial luciferase was coupled to human IgG with glutaraldehyde to provide an immunoscintillation **tracer**. This reagent, anti-human IgG, and sample were mixed and incubated until equilibrium was reached. Bound and free **tracer** were separated on an immunosorbent column containing anti-human IgG immobilized on CNBr-activated Sepharose 4B. Luminescence was induced by addition of FMN, reduction with dithionite, and addition of O-saturated H₂O containing 0.1%

decaldehyde, and was measured with a photometer.

ED Entered STN: 11 Jan 1987

IC ICM G01N021-76

ICS G01N033-532; G01N033-533; G01N033-536

NCL 436501000

CC 9-2 (Biochemical Methods)

Section cross-reference(s): 15

ST **immunoassay tracer** bioluminescent chemiluminescent substance; luciferase **tracer immunoassay** IgG

IT Blood **analysis**

(blood cells determination in, by luminescence **immunoassay**)

IT Antibiotics

Microorganism

Pesticides

Pharmaceutical **analysis**

Ribosome

Virus

(determination of, by luminescence **immunoassay**)

IT Agglutinins and Lectins

Antibodies

Antigens

Carbohydrates and Sugars, **analysis**

Coenzymes

Complement

Cytochromes

Deoxyribonucleic acids

Enzymes

Globulins, **analysis**

Haptens

Hormones

Interferons

Intrinsic factors

Ligands

Lipids, **analysis**

Proteins, **analysis**

Receptors

Ribonucleic acids

Steroids, **analysis**

RL: ANT (Analyte); ANST (Analytical study)

(determination of, by luminescence **immunoassay**)

IT Aequorins

RL: ANST (Analytical study)

(ligands **labeling** with, for luminescence **immunoassay**)

IT Annelid
 Bacteria
 Coelenterate
 Crustacean
 Dinoflagellate
 Firefly
 Mollusk
 (luciferase of, ligands **labeling** with, for luminescence **immunoassay**)

IT Immunoglobulins
 RL: ANT (Analyte); ANST (Analytical study)
 (G, determination of, by luminescence **immunoassay**)

IT Luminescent substances
 (bio-, ligands **labeling** with, for **immunoassay**)

IT Luminescent substances
 (chemi-, ligands **labeling** with, for **immunoassay**)

IT Hydrazides
 RL: ANST (Analytical study)
 (cyclic, ligands **labeling** with, for luminescence **immunoassay**)

IT **Immunochemical analysis**
 (luminescence **immunoassay**, labels for)

IT Organelle
 (lumisome, ligands **labeling** with, for luminescence **immunoassay**)

IT 50-14-6, Calciferol 58-85-5, Biotin 65-23-6, Pyridoxine
 1406-16-2 12001-76-2 12001-79-5
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, by luminescence **immunoassay**)

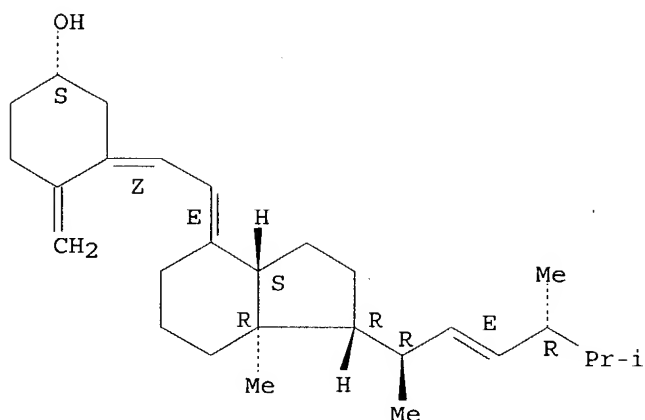
IT 521-31-3, Luminol 2315-97-1, Lucigenin 5796-84-9D,
 Peroxyoxalic acid, derivs. 6788-84-7D, Dioxetane, derivs. 9014-00-0
 42413-70-7 61970-00-1
 RL: ANST (Analytical study)
 (ligands **labeling** with, for luminescence **immunoassay**)

IT 50-14-6, Calciferol
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, by luminescence **immunoassay**)

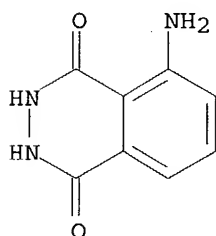
RN 50-14-6 HCAPLUS

CN 9,10-Secoergosta-5,7,10(19),22-tetraen-3-ol, (3 β ,5Z,7E,22E)- (9CI)
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
 Double bond geometry as shown.



IT 521-31-3, Luminol
 RL: ANST (Analytical study)
 (ligands labeling with, for luminescence immunoassay)
 RN 521-31-3 HCAPLUS
 CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



L79 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1982:139257 HCAPLUS

DOCUMENT NUMBER: 96:139257

TITLE: **Immunoassay** with fluorescent label
 excited by luminescent reaction

INVENTOR(S): Campbell, Anthony K.; Simpson, John S. A.; Woodhead, James S.

PATENT ASSIGNEE(S): Welsh National School of Medicine, UK

SOURCE: Can., 30 pp. Division of Can. Appl. No. 316,349.
 CODEN: CAXXA4

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| CA 1116079 | A2 | 19820112 | CA 1981-374108 | 19810327 |
| GB 2095830 | A | 19821006 | GB 1981-33207 | 19781114 |
| GB 2095830 | B2 | 19830323 | | |
| CA 1113392 | A1 | 19811201 | CA 1978-316349 | 19781116 |

| | | | | |
|------------------------|---|----------|----------------|-------------|
| CH 645725 | A | 19841015 | CH 1983-6672 | 19831213 |
| PRIORITY APPLN. INFO.: | | | GB 1977-47839 | A 19771117 |
| | | | CA 1978-316349 | A3 19781116 |
| | | | CH 1978-11636 | A 19781113 |
| | | | GB 1978-44457 | A 19781114 |

AB Methods are described for the use of luminescent compound-labeled reagents in **immunoassays** and protein-binding **assays**, in in-vitro and in-vivo turnover studies, in histochem. localization of compds., and in tracing substances undergoing redistribution in in biol. systems or being separated by e.g. chromatog. The methods are especially applicable

to homogeneous **assays** in which a luminescent compound-labeled substance is reacted with an antibody or antigen labeled with a fluorescent label, and a luminescent reaction is triggered, the energy from the luminescent reaction exciting the fluorescent label to produce a wavelength shift in light emission or a change in quantum yield. Thus, in a homogeneous **immunoassay** for cAMP, antibody to cAMP was labeled with luminol, and succinyl cAMP was labeled with fluorescein. The labeled antibody and labeled cAMP were incubated at pH 7.4, peroxidase and H2O2 were added, and light emission was measured at 540 nm. Emission at 540 nm is from the fluorescein-labeled succinyl cAMP which is bound to antibody, since unbound antibody emits at 460 nm. The wavelength shift occurs only when labeled cAMP and labeled antibody are bound together.

ED Entered STN: 12 May 1984

IC G01N021-64; G01N033-54

CC 9-2 (Biochemical Methods)

Section cross-reference(s): 1, 2, 4, 15

ST **immunoassay** fluorescence luminescence; cAMP **immunoassay** fluorescence luminescence; drug **immunoassay** fluorescence luminescence; hormone **immunoassay** fluorescence luminescence; vitamin **immunoassay** fluorescence luminescence; protein binding **assay** fluorescence luminescence

IT Erythrocyte

(antigen **detection** on, with luminol-labeled antibodies)

IT Cell membrane

(antigens **detection** in, of adipocyte by luminescence **immunoassay**)

IT Pharmaceutical analysis

(by **immunoassay** with fluorescent label excited by luminescence reaction)

IT Antigens

RL: ANT (Analyte); ANST (Analytical study)

(**detection** of, by luminescence **immunoassays**)

IT Haptens

Hormones

Vitamins

RL: ANT (Analyte); ANST (Analytical study)

(determination of, by **immunoassay** with fluorescent label excited by luminescence reaction)

IT Antibodies

RL: ANST (Analytical study)

(luminol-labeled, in **immunoassays**)

IT Adipose tissue, composition

(adipocyte, antigens **detection** in cell membrane of, by luminescence **immunoassay**)

IT **Immunochemical analysis**

(**immunoassay**, fluorescent label excited by

luminescent reaction in)

IT **Immunochemical analysis**
(immunofluorescent staining, of antigens)

IT Fetoproteins
RL: ANT (Analyte); ANST (Analytical study)
(α -, determination of, by 2-site **immunoassay** with luminol-labeled antibodies)

IT 50-23-7 50-27-1 50-28-2, **analysis** 51-48-9,
analysis 52-39-1 57-27-2, **analysis** 57-41-0
57-83-0, **analysis** 58-22-0 59-05-2 60-92-4 67-52-7D,
derivs. 69-72-7, **analysis** 81-24-3 475-31-0 561-27-3
3616-08-8 6893-02-3 7665-99-8 **19356-17-3** 20830-75-5
32222-06-3
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by **immunoassay** with fluorescent label
excited by luminescence reaction)

IT 9002-64-6
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by **immunoassay** with luminol-labeled
antibodies)

IT 2321-07-5D, reaction products with antigens
RL: ANST (Analytical study)
(in **immunoassay** with fluorescent label excited by
luminescent reaction)

IT **521-31-3**
RL: ANST (Analytical study)
(in **immunoassays**)

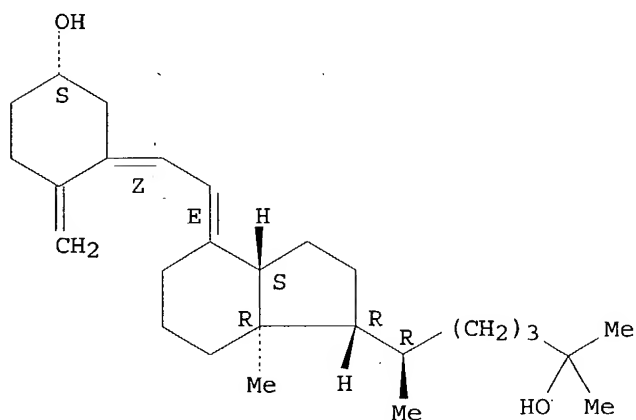
IT 9003-99-0 7722-84-1, biological studies
RL: ANST (Analytical study)
(in luminescence **immunoassays**)

IT **19356-17-3 32222-06-3**
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by **immunoassay** with fluorescent label
excited by luminescence reaction)

RN 19356-17-3 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3 β ,5Z,7E)- (9CI) (CA
INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

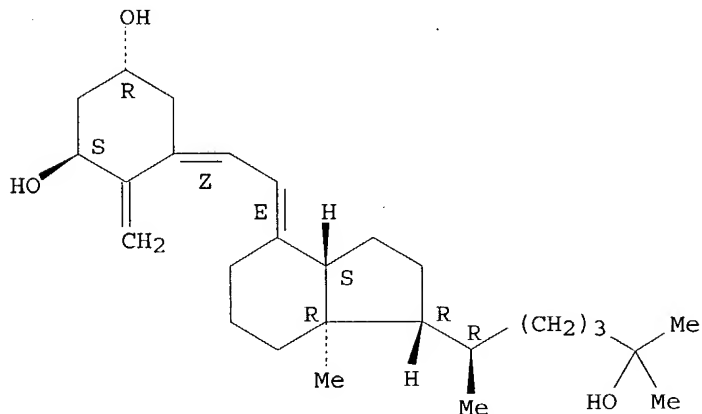


RN 32222-06-3 HCAPLUS

CN 9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1 α ,3 β ,5Z,7E)-

(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as shown.

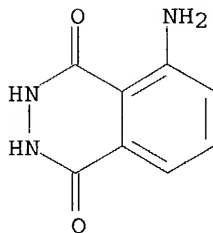


IT 521-31-3

RL: ANST (Analytical study)
(in immunoassays)

RN 521-31-3 HCAPLUS

CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



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